

My name is Gary Dunbar, I am the Director of the Neuroscience Program at Central Michigan University and former President of the Michigan Chapter for the Society for Neuroscience. In addition, I am Scientific Advisor for the Michigan Chapter of the Huntington's Disease Society of America.

As a scientist, my support for the pending legislation comes from my conviction that embryonic stem cells, in certain situations, have more therapeutic potential than adult-derived stem cells. I am dismayed by the blatantly false claims that adult stem cells have been shown, consistently, to be much more efficacious for treating diseases and disorders than embryonic stem cells. For example, the claim that adult stem cells are more capable of differentiating into the type of cells needed for replacing damaged or lost cells in the mammalian brain than are embryonic stem cells is certainly not true, at least not as a general rule. My first hand experience of taking stem cells, derived either from the bone marrow of adult mice or from the mouse embryo, and transplanting them into a damaged mouse brain has convinced me that, at least in the model systems with which we work, the embryonic stem cells show a greater degree of survival and migration into the areas of the damaged brain where they are needed most. In addition, the stems cells from the mouse embryo show much more pronounced differentiation into identifiable brain cells than do the adult-derived bone marrow stem cells. **My point here is simple: most of the claims that adult stem cells have more therapeutic potential than embryonic stem cells are misleading at best, and gross distortions, at worst.** There simply has not been enough research to make such definitive claims. My best guess is that adult-derived stem cells will have certain therapeutic advantages

in some situations, whereas embryonic stem cells will have advantages in other situations. As such, the current prohibition on the use of embryonic stem cells for research is essentially closing the door on some of the most promising avenues for developing effective therapies for a variety of diseases and disorders that may not be amenable to treatments using adult-derived stem cells.

Given this, if the blastocysts that are being discarded from in vitro fertilization clinics could be used to develop potentially life-saving therapies, why not put them to good use? Why close the door on potential treatments or cures for our neighbors, family members and friends who are suffering from Huntington's disease, Alzheimer's disease, Parkinson's disease, diabetes, heart disease, kidney disease, liver disease, respiratory disorders, traumatic brain injury and stroke, and a myriad of other yet-to-be cured diseases and disorders?

Falsely claiming that adult-derived stem cells is the answer—that they are more efficacious, in all cases, than embryonic stem cells—not only holds out false hopes, but ignores the real possibility that many of these maladies might be more effectively treated with embryonic stem cells. Similarly some of the propaganda being distributed, that portray women selling their ova or scientists using embryos that would otherwise be adopted by a families, are gross distortions of what the bill under consideration would allow. The bill simply says that **only tissue that will be discarded by in vitro fertilization clinics can be used**. No selling of ova, and no use of blastocysts without the written consent of the donors, will be allowed. Only tissue that would otherwise be

thrown away, can be used. **In summary, the question before you is very simple:**
Will you allow tissue that would otherwise be discarded to be used for the noble purpose of finding potential treatments for the devastating diseases and disorders that plague nearly a million fellow citizens in Michigan? Voting against this bill will not save a single embryo, but voting for this bill may help save lives and could potentially provide effective treatments for thousands of your constituents. There is really only one rational and compassionate choice here, and that it is to support this bill.

